

How Well Is Denver Water Doing?

Denver Water has been very fortunate to have clean source water with which to start treatment. The table below illustrates the effectiveness of treatment for a few parameters of note.

As mentioned earlier turbidity is a measurement of the clarity of the water; thus a low turbidity indicates good water clarity. Most microorganisms including bacteria are attached to particulate matter, which accounts for much of the turbidity in water. Therefore, turbidity is an extremely important parameter and has been regulated by the EPA for many years. The old standard was 0.50 turbidity units. New research indicates that the old turbidity standard was too high and a new regulation is now in effect. This regulation requires that turbidities in the treatment plant effluent waters be less than 0.30 turbidity units. For the last few years Denver Water has maintained plant effluent turbidities less than 0.20 turbidity units. Most of the time, we have less than 0.10 turbidity units!

Water hardness is relative, but in general, water with hardness above 12 grains per gallon is considered “hard” water. Hardness in water is an aesthetic quality and does not relate to the safety of the water. It relates to the mineral content of the water. When the mineral content of the water is higher, the water is harder. You may have noticed that in areas that have “hard” water, the ability to form soapsuds is lessened. Many customers inquire about the hardness of their water. The South Platte source has moderately hard water that varies seasonally from about 5 to 7 grains per gallon (gpg) of hardness. The Moffat source, on the other hand is very soft, with hardness in the range of about 2 to 4 gpg. Some customers normally served with water from the Moffat source, can detect the difference when they are served with water from the South Platte source.

The total coliform test is a measure of all types of coliform bacteria in the water. Coliform bacteria are found in the intestines of all mammals, including humans, as well as in soils and on plants. Coliform bacteria, which include *E. coli*, are tested to determine the safety of the water. We test for total coliform in our plant effluent waters as well as throughout our entire distribution system. On the rare occasion when a sample has tested positive for total coliform, we must then test for *E. coli*, as well as resample and re-test not only the original site, but also up and downstream of it. To date *E. coli* has not been detected in the treated water. If it was, public notification would be mandated, and we would isolate and correct the problem.

Values for 2001

Parameter	Treatment Plant	Raw Water Result	Finished Water Result
Turbidity	Marston	0.87	0.05
Turbidity	Foothills	2.45	0.04
Turbidity	Moffat	2.73	0.05
Total Coliform	Marston	179	None detected
Total Coliform	Foothills	268	None detected
Total Coliform	Moffat	81	None detected